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THREE NEW MAMMALS FROM CHINA.

BY A. BRAZIER HOWELL.

In identifying the mammals of the valuable collections of Chinese vertebrates secured during the last few years by Arthur de C. Sowerby and presented to the U. S. National Museum there were encountered several series representing well-marked geographical races for which no names are at present available. Three of these may be known as follows:

*Crocidura grisea*, sp. nov.

*Type*.—Female adult, skin and skull No. 238229, U. S. National Museum, from 75 miles southwest of Yenpingfu, Fukien, China, altitude 500 feet; November 23, 1921. Collected by Arthur de C. Sowerby; original number 1076.

*Diagnosis*.—The smallest of the all-gray Chinese members of the genus so far known.

*Skin*.—In coloration this animal is pure slate gray faintly grizzled above, of a shade apparently different from any Chinese shrew so far named. Nor can the color be matched in any European species known to the writer, but it can be duplicated among the lighter examples of the American *Neosorex navigator*. Ventrals the coloration is slightly paler and more silvery than is the case dorsals. The tail is rather long for the size of the body and is lighter below than above, but it can not be said to be bicolor. The caudal bristle hairs are few in number. The dorsum of the hind feet is dusky along the lateral margin.

*Skull*.—The skull is of about the same length as that of *attenuata*, as figured by Milne-Edwards (1868-1874), but the cranium proper is relatively shorter and the postorbital dilation is stronger and more abrupt. The first upper unicuspid is very broad in an antero-posterior direction, its total width being practically as great as the width of the root of the incisor. The second unicuspid is considerably the smallest but its crown is as high as that of the third. The anterior cusp of the carnassial is less than half the height of the main cusp, but equal in height to the third unicuspid.

*Measurements of type*.—Collector's measurements of the type are: head and body, 70; tail, 56; foot, 12; ear, 9 mm. The total length of the skull

is 20; width of braincase, 9; interorbital width, 4.6; and length of maxillary tooth row, 6.5 mm.

*Material*.—Three skins and skulls, all from the vicinity of the type locality.

*Remarks*.—The relationship of this shrew apparently is with *attenuata*. From the latter it certainly differs, for Milne-Edward's plates, as well as his descriptions, are trustworthy, and *grisea* not only is without any brown dorsad, but the flanks are much darker. Certainly it has nothing in common with the other gray, but large-footed, shrews of China.

#### ***Myotis sowerbyi* sp. nov.**

*Type*.—Female adult, skin and skull No. 238869, U. S. National Museum, from near Yenpingfu, Fukien, China, altitude 3000 feet; April 7, 1922. Collected by Arthur deC. Sowerby; original Number 1366.

*Diagnosis*.—Skin and superficial characters of the skull much as in the European species *mysticinus*, but color much darker and more smoky, with no brown, and the membrane black instead of brownish. The concavity of the posterior border of the ear is more pronounced and the tragus is much narrower. Mandible with canine practically no higher than large first premolar, and second premolar minute, instead of canine large and both premolars small as in *mysticinus*.

*Skin*.—The dorsal surface is close to the clove brown of Ridgway (1912). The hairs of the under surface are for the most part dark at base with paler buffy tips, but in the anal region they are buffy to the base. Both interfemoral and wing membranes are practically naked. The digital hairs are scanty and do not extend beyond the claws. The feet are of but moderate size. In the spirit specimens the terminal vertebra of the tail extends free of the membrane, but this is not satisfactorily apparent in the dried skins. The wing membranes extend well onto the base of the toes. The ear is narrow, but not to the same extent as in the next species, and the distal half of the posterior margin is gently concave. The tragus is narrow and acute, and measured from the notch, extends more than half the distance to the tip of the ear.

*Skull*.—The braincase is rather small, the interorbital declivity gentle when viewed in profile, and there is no appreciable elevation of the tip of the rostrum. The more posterior of the small upper premolars is half the size of the anterior and in the tooth row. The outer upper incisor is considerably smaller than the inner. The lower canines are very low indeed and of lesser height than the main cusps of some of the molars. The first lower premolar, however, is relatively very large, and but a shade smaller than the canine, while the second lower premolar is minute.

*Measurements of type*.—The collector's measurements of the type are: head and body, 40; tail, 37; ear, 11; forearm, 34 mm. Additional measurements are: tarsus, 15.3; foot, 8.3; length of skull, 13; zygomatic width, 7.9; maxillary tooth row, 5.7 mm.

*Material*.—One skin and skull from Foochow, Fukien, and 15 skins and skulls, and 38 spirit specimens from Yenpingfu, Fukien.

*Remarks*.—It is felt that the dental differences between *sowerbyi* and

*mysticinus* are beyond any doubt of specific degree. There has been no opportunity for comparison with unquestioned *siligorensis* Hodgson, but even the describer regarded it as perhaps identical with *mysticinus*. Dobson always considered it in this light, and Wroughton (1918) recognizes it as the Indian representative of *mysticinus* but offers no comparisons. It is hardly likely that such important dental differences as occur in the mandible of *sowerbyi* could have been overlooked by all of these authorities.

***Myotis hirsutus* sp. nov.**

*Type*.—Female adult, skin and skull No. 238863, U. S. National Museum, from near Yenpingfu, Fukien, China, altitude 2000 feet; April 7, 1922. Collected by Arthur deC. Sowerby; original Number 1358.

*Diagnosis*.—A *Myotis* of the general type of the European species *capaccinii*, but coloration duller and much darker, tail longer, forearm a trifle shorter, and ear darker and narrower. The hairiness of the membranes is not quite so well marked. Skull slightly smaller and upper outer incisor larger.

*Skin*.—In coloration the dorsal surface is near the fuscous of Ridgway (1912). The hairs of the underparts are much paler distad, and darker at base over most of this area. In the anal region, however, they are pale at base as well. The ventral surface of the interfemoral membrane is quite heavily (relatively) haired for some 5 mm. caudad of the body and 4 mm. mediad of the legs, the remainder of the membrane being very scantily haired. The under surface of the wing membrane caudad of the brachium is scantily haired as far laterad as the elbow, but the upper surface is bare. Dorsad the interfemoral membrane is well haired as far caudad as the middle tail. The terminal vertebra of the tail is not free. The wing membrane arises from the tarsus or ankle—not the toes. The foot is relatively large and the digital hairs extend beyond the nail tips. The ears are long and unusually narrow, the middle of the posterior border being quite sharply concave. The tragus is slender and acute, and measured from the notch in the dried skin, does not extend half way toward the tip of the ear.

*Skull*.—The braincase is moderately inflated and the rostrum rather long, the elevation of its tip being very slight. The upper outer incisor is almost or quite as long as the inner. The second small premolar is at least half and usually two-thirds as large as the first and is always in the tooth row. The lower incisors are rather crowded.

*Measurements of type*.—The collector's measurements of the type are: head and body, 48; tail, 38; ear, 15; forearm 40 mm. Other measurements are: tarsus, 15.2; foot, 10.1; length of skull, 15.1; mastoid width, 7.5; and maxillary tooth row, 6.7 mm.

*Material*.—Twelve skins and skulls and one spirit specimen from Yenpingfu, Fukien.

*Remarks*.—This bat is definitely distinct from anything so far described from China. In coloration it is comparable with *pequinius* Thomas but the latter is much larger. As already mentioned, its conformation is of the general type of *capaccinii*, and it may later prove to be the Chinese representative of that species.